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6. [South African Journal of Zoology Vol 24 \(1989\)](#)

... S. Afr. J. Zool. 24(1):322-328 Villet M. Systematic status of ***Platypleura*** stridula L. and ***Plat capensis*** L. (Homoptera, Cicadidae). *S. Afr. J. Zool.* ...
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7. [African Entomology](#)

... VAN NOORT, S. An association of *Italoichrysa neurodes* (Rambur) (Neuroptera: Chrysopidae) ***Platypleura capensis*** (Linnaeus) (Hemiptera: Cicadidae) 92--94. ...
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8. [AEN Volume 1, Issue 2: Full Articles](#)

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10. Neuropterists Newsletter

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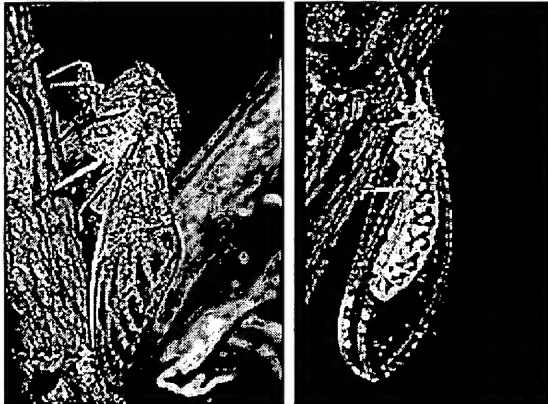
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Cicadas and lacewings - a peculiar association

(Phylum: Arthropoda; Class: Hexapoda; Order: Hemiptera; Suborder: Auchenorrhyncha; Family: Cicadidae)

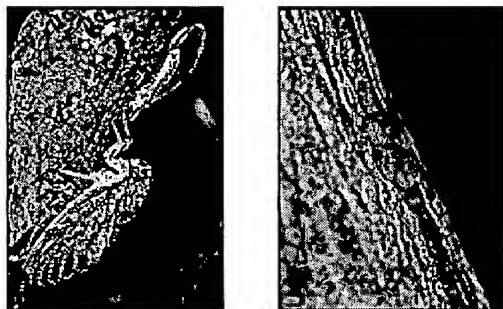
(Phylum: Arthropoda; Class: Hexapoda; Order: Neuroptera; Family: Chrysopidae)

An interesting association between a lacewing, *Italochrysa neurodes* (Neuroptera, family Chrysopidae) and a cicada, *Platypleura capensis* (Hemiptera, family Cicadidae) was described a few years ago (van Noort, 1995).



Cicada, *Platypleura capensis*, feeding on the host plant, *Chrysanthemoides monilifera*. The proboscis can be seen penetrating the branch.

Lacewing, *Italochrysa neurodes*, feeding on plant sap.



Cicada and lacewing on a host plant branch.

Plant sap seeping from a puncture in a host plant branch after the cicada has fed.

This association was first observed in Fernkloof Nature Reserve in the mountains above Hermanus in the south western Cape during the hot summer months from November to February. During this period the continuous high pitched call of *P. capensis* is a familiar sound. The call however stops abruptly should one approach its host plant, one of which is *Chrysanthemoides monilifera*, without extreme care. The cicada feeds in a near vertical position, facing upwards, on a branch. This is done by extracting sap by inserting its proboscis

into the branch of its host plant. The lacewing is attracted to the calling and feeding cicada and lands on the branch near it and then positions itself above the cicada on the branch, facing it head-on. Sometimes when the cicada flies off, the lacewing moves toward the puncture made by the cicada and proceeds to feed on the plant sap.

Sometimes the lacewing makes physical contact by resting its antennae on the cicada's head which is followed by the cicada 'pawing' the lacewing's antennae with its forelegs. The lacewing then retreats a few centimetres and relinquishes contact. The cicada continues to call and feed throughout the interaction.

Similar behaviour patterns were observed in Natal at the end of the 19th century, except in this case, a total of 16 lacewings of another species formed a semicircle around an unidentified calling cicada's head, occasionally approaching and touching it.

It appears that the reason for the lacewing being attracted to the cicada is probably to gain access to plant sap made available by the cicada puncturing the plant stem. The question then arises as to how the lacewing locates the calling cicada. The lacewing could either be using an olfactory stimulus (smell) as they are attracted to honeydew and the volatiles in the cicadas excreted waste could attract them. However, this is unlikely as the cicadas spray their excrement away from themselves and their perches. It is more likely that the lacewing is using the auditory stimulus of the cicada call. It has been established that the lacewing subfamily Chrysopinae, to which this lacewing belongs, has a tympanal groove in the forewing that acts as an auditory organ. The fact that lacewings use hearing to avoid bat predation would suggest that it is plausible that these lacewings locate feeding and calling cicadas using sound. This hypothesis is still under investigation.

Reference

- Van Noort, S. 1995. An Association of *Italochrysa neurodes* (Rambur) (Neuroptera: Chrysopidae) with *Platypleura capensis* (Linnaeus) (Hemoptera: Cicadidae). *African Entomology* 3(1): 92-94.

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